

What is claimed:

1. An apparatus for expanding a casing comprising:
  - an expandable casing;
  - a drill string extending to within the drill string;
  - an expansion cone suspended from the drill string, the expansion cone having an expanded state and a collapsed state and wherein the expansion cone is deformable to the expanded state and is relaxed in the collapsed state;
  - a seal bushing capable of sealing an annulus between the drill string and the expandable casing;
  - a downward expansion flow path wherein fluid communication is provided between the inside of the drill string and the annulus between the drill string and the expandable casing above the expansion cone; and
  - an upward expansion flow path wherein fluid communication is provided between the inside of the drill string and the inside of the expandable casing for upward expansion by the expansion cone.
2. The apparatus of claim 1 further comprising a cement shoe attached to the expandable casing below the expandable cone.
3. The apparatus of claim 1 wherein the expandable cone has is capable of a third state wherein the expandable cone has an outer diameter between the outer diameter of the expanded state and the collapsed state.
4. The apparatus of claim 1 wherein the expandable casing comprises a preexpanded portion wherein the preexpanded portion has been partially expanded.

5. The apparatus of claim 1 wherein the expansion cone comprises a means for expanding the expansion cone to a diameter greater than the initial internal diameter of the preexpanded portion of the expandable casing.

6. The apparatus of claim 2 further comprising a valve that can close flow through the cement shoe upon activation of the valve.

7. The apparatus of claim 6 wherein a dart flowing down the drilling string activates the valve.

8. The apparatus of claim 7 wherein the dart comprises a seal that provides additional sealing of flow through the cement shoe.

9. The apparatus of claim 6 wherein the valve is a sliding valve.

10. The apparatus of claim 1 further comprising an assembly mandrel capable of pulling together parts of the expandable cone to change the expandable cone from the collapsed state to the expanded state.

11. The apparatus of claim 10 wherein the assembly mandrel is acted on by at least one piston to press together parts of the expandable cone to change the expandable cone from the collapsed state to the expanded state.

12. The apparatus of claim 10 wherein the assembly mandrel is acted on by a plurality of pistons.